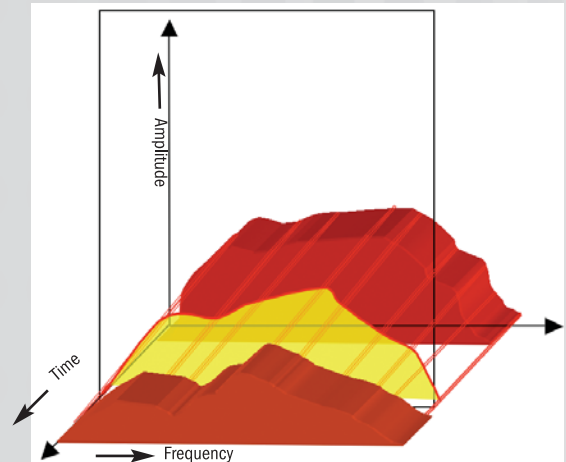
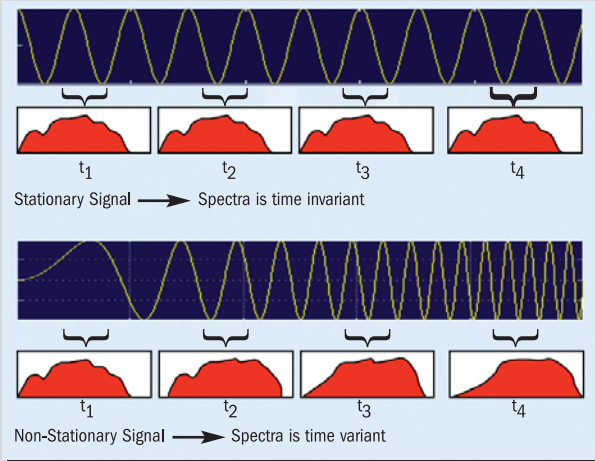


Wavelet Transform Filter

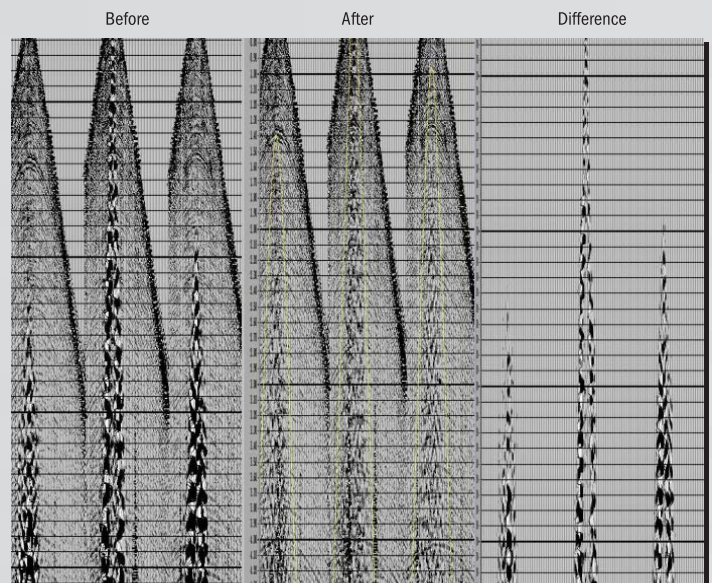
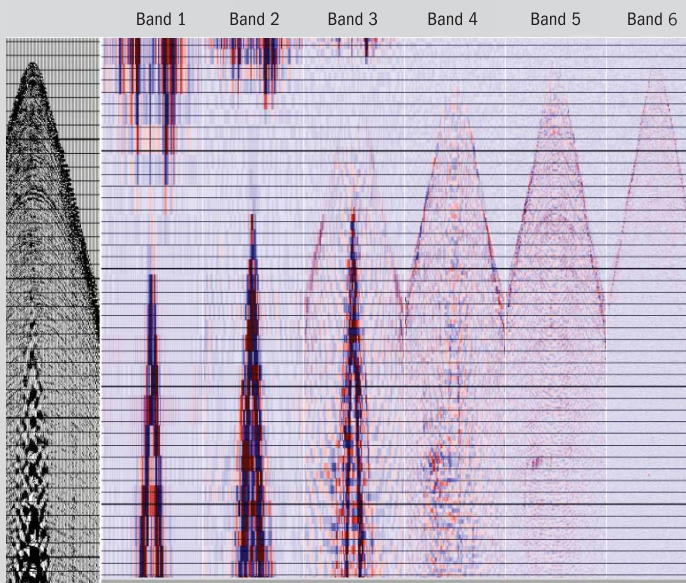
The Wavelet Transform Filter (WTF) is one of the many filtering techniques, based on state of the art digital signal processing methods, used successfully at Geotrace to increase the Signal-to-Noise ratio in your Data. WTF is a key ingredient in Geotrace's filter and noise elimination technique library.

Wavelet Transform Basics



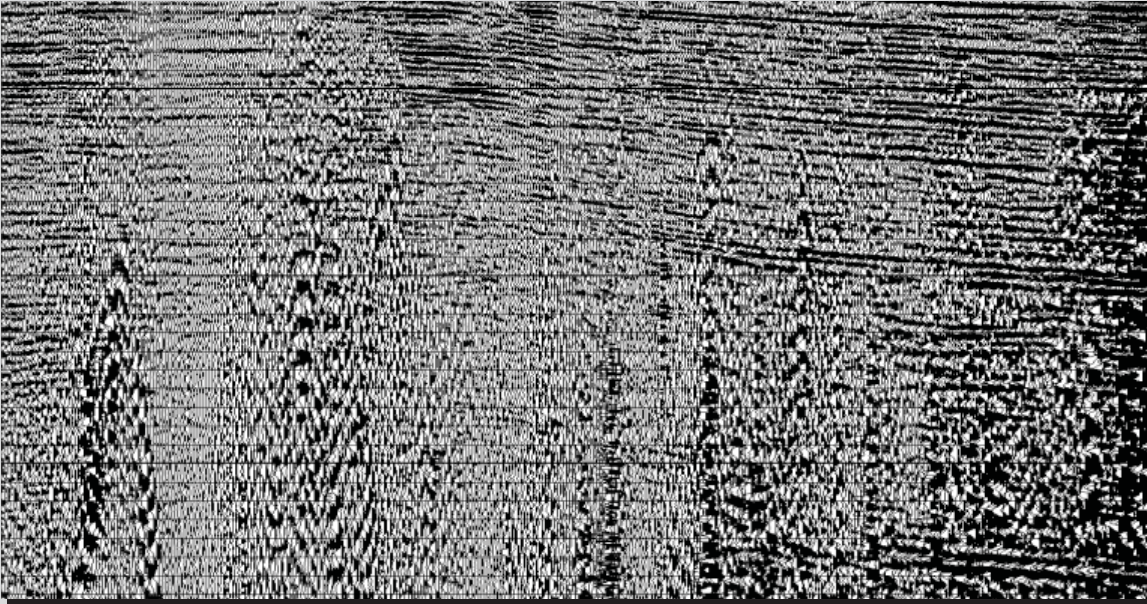
Example of the time varying nature of seismic data. As the different slices in time are observed, a continuous change in the seismic spectrum becomes evident.

Wavelet Transforms capture the non-stationary nature of the seismic signal by separating it into sub-bands or scales. It transforms the data from a *(space, time)* domain in to a hybrid *(space, time, frequency)* domain providing a *natural* mapping between frequency sub-bands and scales in the data.

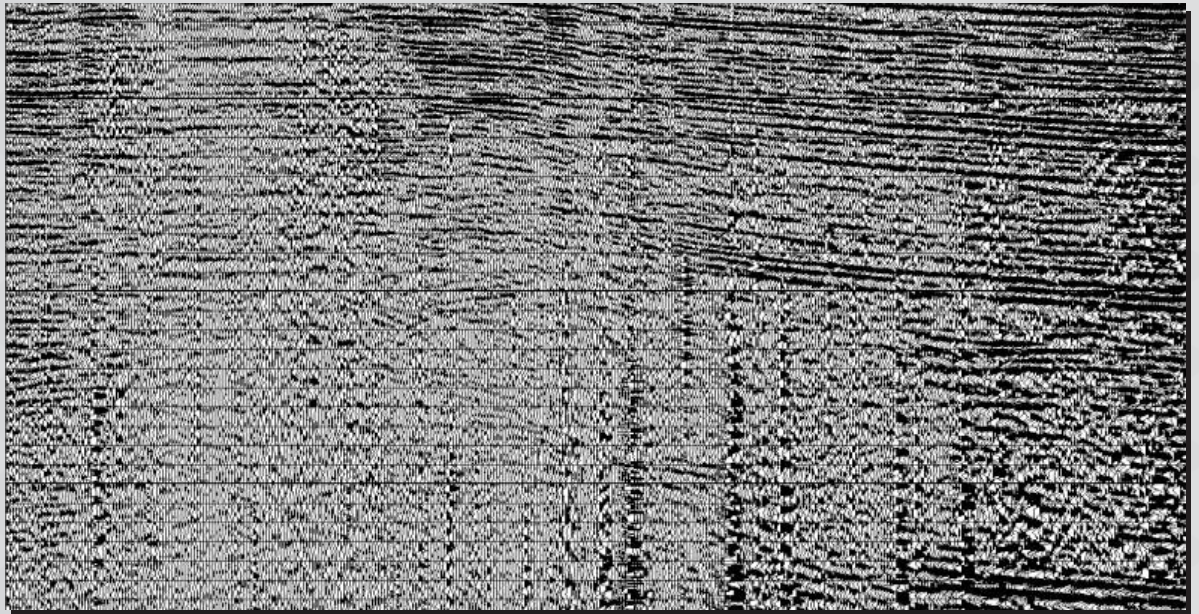


Linear Noise has a preferred scale in which it expresses itself maximally. WTF provides the natural sub-band decomposition needed to separate and filter these noises. WTF has been applied to these shots, clearly eliminating the linear noise visible primarily in the low frequency part of the spectrum.

Raw Stack



WTF Stack



The beneficial effect of the WTF is apparent in these before-after pictures. Note that the filtering was done in the prestack (shot) domain.

